

REMARKS

This paper is responsive to a Non-Final Office Action dated November 12, 2004. Claims 1-37 were examined. Claims 1, 19, 20, and 31 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 2, 4-18, 23-31, and 33-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,838,681 to Bonomi et al. in view of U.S. Patent No. 5,577,035 to Hayter et al. Claims 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonomi in view of Hayter and further in view of U.S. Patent No. 6,160,812 to Bauman et al. Claims 3, 24-26, and 32 are objected to as being dependent upon a rejected base claim.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-7, 19, 20, and 31-34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding claims 1-7 and 31-34, the Office Action states that “it is not clear what is meant by ‘the first and the second group of resources being mutually exclusive.’” Claims 1 and 31 are amended to improve clarity. Accordingly, Applicants respectfully request that the rejection of claims 1-7 and 31-34 be withdrawn.

Regarding claims 19 and 20, the Office Action states that “it is not clear what is meant by ‘a vector including the preallocated requests and the regular requests from the sources on the network.’” Applicants refer the Examiner to FIG. 14 and associated portions of the specification, and the specification at least beginning at page 8, line 18 which provide examples of vectors including the preallocated requests and the regular requests from the sources on the network. Accordingly, Applicants respectfully request that the rejection of claims 19 and 20 be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 2, 4-18, 23-31, and 33-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,838,681 to Bonomi et al. in view of U.S. Patent No. 5,577,035 to Hayter et al.

Claim 1 is amended to recite that

the resources requested comprise data paths through a communication network, the data paths coupling initiator nodes of the network to target nodes of the network.

Regarding amended claim 1, Applicants respectfully maintain that Bonomi, alone or in combination with Hayter or other references of record, fails to teach or suggest

allocating a first group of one or more of the resources in accordance with first requests for the resources, the first group being allocated for a particular time period,

as recited by amended claim 1. Bonomi teaches time division multiplexing cells for multiple ports into one data stream supplied to a switch core. (Col. 12, lines 11-15) The system of Bonomi allocates switch capacity according to bandwidth demands. (Col. 9, lines 11-30; col. 11, line 62-col. 12, line 16) The requests of Bonomi are requests from the ports for capacity, not first requests for resources, as recited in amended claim 1.

Hayter fails to compensate for the shortcomings of Bonomi. Hayter teaches scheduling timeslots for unicast traffic cells, scheduling timeslots for multicast cells, and transmitting the unicast and multicast traffic cells across the switch in their respective time slots. (Col. 2, lines 15-32; FIGS. 5-13) Hayter teaches allocating timeslots based on bandwidth requests (col. 3, line 48-col. 5, line 8), not allocating resources in accordance with first requests for data paths through a communication network, the data paths coupling initiator nodes of the network to target nodes of the network, as recited in amended claim 1.

Thus, Bonomi, alone or in combination with Hayter or other references of record, fails to teach or suggest the limitations of amended claim 1. For these reasons, Applicants respectfully maintain that claim 1 distinguishes over Bonomi, alone or in combination with Hayter, and all references of record. Accordingly, Applicants respectfully request the rejection of claim 1, and all claims dependent thereon, be withdrawn.

Claim 2 is cancelled.

Regarding claim 8, Applicants respectfully maintain that Bonomi alone or in combination with Hayter or other references of record, fails to teach or suggest

an arbiter coupled to receive first requests for transfers from one or more of the sources to one or more of the targets during a time slot on the data transport medium and coupled to receive regular requests from the sources for transfers from one or more of the sources to one or more of the targets during the time slot, the arbiter allocating the targets to the sources in accordance with the first requests and then in accordance with the regular requests,

as recited by claim 8. Bonomi teaches time division multiplexing cells for multiple ports into one data stream supplied to a switch core. (Col. 12, lines 11-15) The system of Bonomi allocates switch capacity according to bandwidth demands. (Col. 9, lines 11-30; col. 11, line 62-col. 12, line 16) The system of Bonomi allocates bandwidth in response to requests from the ports for capacity, not allocating targets to sources in accordance with first requests for transfers from a source to a target during a timeslot on a data transport medium, as recited in amended claim 1.

Hayter fails to compensate for the shortcomings of Bonomi. Hayter teaches scheduling timeslots for unicast traffic cells, scheduling timeslots for multicast cells, and transmitting the unicast and multicast traffic cells across the switch in their respective time slots. (Col. 2, lines

15-32; FIGS. 5-13) Hayter teaches allocating timeslots based on bandwidth requests (col. 3, line 48-col. 5, line 8), not based on first requests for transfers from one or more of the sources to one or more of the targets during a time slot on the data transport medium, as required by claim 8.

For these reasons, Applicants respectfully maintain that claim 8 distinguishes over Bonomi, alone or in combination with Hayter, and all references of record. Accordingly, Applicants respectfully request the rejection of claim 8, and all claims dependent thereon, be withdrawn.

Claim 23 is amended to recite that

the resources are slots in the communication network connecting an input port to one or more output ports in a network switch.

Regarding amended claim 23, Applicants respectfully maintain that Bonomi alone or in combination with Hayter or other references of record, fails to teach or suggest

during a first arbitration phase, reserving a first portion of the resources for a particular time period on the network in response to requests for scheduled transfers,

as recited in claim 23. Bonomi teaches time division multiplexing cells for multiple ports into one data stream supplied to a switch core. (Col. 12, lines 11-15) The system of Bonomi allocates switch capacity according to bandwidth demands. (Col. 9, lines 11-30; col. 11, line 62-col. 12, line 16) Bonomi allocates bandwidth in response to requests from the ports for capacity, not in response to requests for scheduled transfers, as recited in amended claim 23.

Hayter fails to compensate for the shortcomings of Bonomi. Hayter teaches scheduling timeslots for unicast traffic cells, scheduling timeslots for multicast cells, and transmitting the unicast and multicast traffic cells across the switch in their respective time slots. (Col. 2, lines 15-32; FIGS. 5-13) Hayter teaches allocating timeslots based on bandwidth requests (col. 3, line 48-col. 5, line 8), not in response to requests for scheduled transfers, as required by claim 23.

Thus, Bonomi, alone or in combination with Hayter or other references of record, fails to teach or suggest during a first arbitration phase, reserving a first portion of the resources for a particular time period on the network in response to requests for scheduled transfers, and during a second arbitration phase allocating a second portion of the resources in response to regular requests.

For these reasons, Applicants respectfully maintain that claim 23 distinguishes over Bonomi, alone or in combination with Hayter, and all references of record. Accordingly, Applicants respectfully request the rejection of claim 23, and all claims dependent thereon, be withdrawn.

Claim 27 is cancelled.

Claim 31 is amended to recite that

the resources requested comprise data paths through a communication network, the data paths coupling initiator nodes of the network to target nodes of the network.

Regarding claim 31, Applicants respectfully maintain that Bonomi alone or in combination with Hayter or other references of record, fails to teach or suggest

allocating a first group of one or more of the resources in accordance with first requests for the resources, the first group being allocated for a particular time period

as recited by amended claim 31. Bonomi teaches time division multiplexing cells for multiple ports into one data stream supplied to a switch core. (Col. 12, lines 11-15) The system of Bonomi allocates switch capacity according to bandwidth demands. (Col. 9, lines 11-30; col. 11, line 62-col. 12, line 16) The requests of Bonomi are requests from the ports for capacity, not first requests for resources, as recited in amended claim 31.

Hayter fails to compensate for the shortcomings of Bonomi. Hayter teaches scheduling timeslots for unicast traffic cells, scheduling timeslots for multicast cells, and transmitting the unicast and multicast traffic cells across the switch in their respective time slots. (Col. 2, lines 15-32; FIGS. 5-13) Hayter teaches allocating resources based on bandwidth requests (col. 3, line 48-col. 5, line 8), not in accordance with first requests for resources comprising data paths through a communication network, the data paths coupling initiator nodes of the network to target nodes of the network, as recited in amended claim 31.

Thus, Bonomi, alone or in combination with Hayter or other references of record, fails to teach or suggest the limitations of amended claim 31. For these reasons, Applicants respectfully maintain that claim 31 distinguishes over Bonomi, alone or in combination with Hayter, and all references of record. Accordingly, Applicants respectfully request the rejection of claim 31, and all claims dependent thereon, be withdrawn.

Regarding claim 35, Applicants respectfully maintain that Bonomi alone or in combination with Hayter or other references of record, fails to teach or suggest

an arbiter coupled to receive first requests for transfers from one or more of the sources to one or more of the targets during a time slot on the data transport medium and coupled to receive second requests from the sources for transfers from one or more of the sources to one or more of the targets during the time slot, the arbiter allocating the targets to the sources in accordance with the first requests and then in accordance with the second requests,

as recited by amended claim 35. Bonomi teaches time division multiplexing cells for multiple ports into one data stream supplied to a switch core. (Col. 12, lines 11-15) The system of Bonomi allocates switch capacity according to bandwidth demands. (Col. 9, lines 11-30; col. 11, line 62-col. 12, line 16) The system of Bonomi allocates bandwidth in response to requests from the ports for capacity, not allocating targets to sources in accordance with first requests for

transfers from a source to a target during a timeslot on a data transport medium, as recited in amended claim 35.

Hayter fails to compensate for the shortcomings of Bonomi. Hayter teaches scheduling timeslots for unicast traffic cells, scheduling timeslots for multicast cells, and transmitting the unicast and multicast traffic cells across the switch in their respective time slots. (Col. 2, lines 15-32; FIGS. 5-13) Hayter teaches allocating timeslots based on bandwidth requests (col. 3, line 48-col. 5, line 8), not based on first requests for transfers from one or more of the sources to one or more of the targets during a time slot on the data transport medium, as required by claim 35.

For these reasons, Applicants respectfully maintain that claim 35 distinguishes over Bonomi, alone or in combination with Hayter, and all references of record. Accordingly, Applicants respectfully request the rejection of claim 35, and all claims dependent thereon, be withdrawn.

Claims 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonomi in view of Hayter and further in view of U.S. Patent No. 6,160,812 to Bauman et al. Claim 21 is amended to recite

allocating during a first arbitration phase requests for the resources based on the precalculated schedule and allocating during a second arbitration phase the regular requests for the resources, wherein the resources requested comprise data paths through a communication network, the data paths coupling initiator nodes of the network to target nodes of the network,

which Applicants believe is allowable over the art of record. Accordingly, Applicants respectfully request the rejection of claim 21, and all claims dependent thereon, be withdrawn.

Claim 22 is amended consistent with amendments of claim 21 and to clarify the invention.

Allowable Subject Matter

Claims 3, 24-26, and 32 are objected to as being dependent upon a rejected base claim. Applicants appreciate the indication of allowable subject matter in claims 3, 24-26, and 32. Applicants believe that claims 3, 24-26, and 32 depend from allowable base claims and are allowable for at least this reason.

Additional Remarks


Claim 37 is amended to correct a typographical error.

Claim 38 is added. Applicants believe that Claim 38 is distinguishable over the art of record.

In summary, claims 1, 3-26, 28-38 are in the case. All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,


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